

REMARKS

Attached are a Revocation Of Power Of Attorney With New Power of Attorney And Change Of Correspondence Address and the required Statement Under 37 CFR 3.73(b) signed by the Secretary of the Assignee; namely, Tollgrade Communications, Inc. Applicant requests the correspondence address for this application be changed as set forth in the Revocation Of Power Of Attorney.

The Assignee, Tollgrade Communications, Inc., is a small entity. Accordingly, Applicant requests the records of the Office be amended to reflect small entity status for this application.

In the Office Action, claims 1-14 and 17-23 stand rejected under 35 U.S.C. § 102(e) for anticipation by U.S. patent document 2004/0028189 to Bauer et al.; and claims 15, 16 and 24-27 stand rejected under 35 U.S.C. § 103(a) for obviousness from the teachings of the Bauer et al. document in view of U.S. patent document 6,292,468 to Sanderson.

In response to the foregoing rejections, independent claims 1, 17 and 24 have been amended as set forth above and dependent claims 15 and 22 have been amended to improve their form. After the foregoing amendments claims 1-27 are pending in the application.

Claim 1 is directed to a method of identifying service affecting conditions in the access portion of a network through which a plurality of subscribers are connected to a central point. Step a) of claim 1 has been amended to generally recite that measurements of the electrical characteristics of a subscriber line are obtained via a switch connected to an end of the subscriber line opposite the subscriber. Step b) of claim 1 has been amended to generally recite that information is obtained from a modem connected to the subscriber line between the switch and the subscriber concerning the performance of the subscriber line. Thus, as amended herein, claim 1 recites that electrical characteristics of a subscriber line are obtained via a switch and information concerning the performance of the subscriber line is obtained from a modem connected between the switch and the subscriber and, therefore, does not pass through the switch.

In contrast, the Bauer et al. document discloses taking line model measurements via a switch at the central office (see Bauer et al., paragraphs 38-40, especially lines 1-6 of paragraph 40) and obtaining noise model information regarding subscriber lines via calculations or experiments (see Bauer et al., paragraphs 44 and 45).

In the Bauer et al. document, a test unit 2 is programmed with a plurality of modem models about the performance of pairs of modems that could exist on a line for which a speed prediction is being made. Each modem model can be organized as a table (see Bauer et al., paragraph 56). By indexing into the table and finding the row that is the closest match in construction to the line under test and then indexing across the columns in that row to the column that corresponds to some particular noise model, a particular table entry is selected. The selection provides the anticipated data rates for the modem pair of the construction represented by the canonical line model and the selected combination of disturbing signals (see Bauer et al., paragraph 58). In other words, the Bauer et al. document discloses, teaches and suggests predicting the noise model of a particular subscriber line based upon empirical or calculated data obtained from a different, exemplary line.

Thus, as can be seen, claim 1 is distinguishable over the Bauer et al. document in two ways. First, steps a) and b) of claim 1 require that the measurements be obtained and the information be obtained from the same subscriber line - not measurements obtained from a subscriber line and information obtained from a table. Second, the modem from which the information is obtained is connected to the subscriber line between the switch and the subscriber - not an end point of the subscriber line. To this end, the Bauer et al. document, paragraphs 50-55, teaches that a model for each pair of modems to be included in the table is determined by connecting each pair of modems to different ends of a canonical model - not the actual subscriber line under test.

Absent disclosing, teaching or suggesting a method having all the limitations of claim 1, the Bauer et al. document cannot anticipate claim 1, or claims 2-16 dependent therefrom.

As amended herein, claim 17 recites a method of identifying service affecting conditions in the access portion of a network through which a plurality of subscribers are connected to a central point disposed between a switch and a remote point. A modem is disposed at the central point and another modem is disposed at the remote point of the connection to each subscriber. The switch is operable for connecting the remote point of the connection to each subscriber to a narrow band network. The modem at the central point is operable for coupling the remote point of the connection to each subscriber in communication with a broadband network. Step a) of claim 17 generally recites that information is obtained from the modem connected to the subscriber line at the central point between the switch and the remote point concerning the data transmission rate as a function of frequency of the line.

Step b) of claim 17 recites that the data transmission rate is analyzed as a function of frequency to determine whether it contains a pattern indicative of a service affecting condition. Lastly, step c) of claim 17 recites that the service affecting condition is identified on the subscriber line when a pattern associated with that service affecting condition is identified.

As discussed above in connection with claim 1, the Bauer et al. document does not disclose, teach or suggest obtaining information from a modem connected to the subscriber line under test. Rather, the Bauer et al. document discloses, teaches and suggests that the information regarding a particular subscriber line is obtained from tables. In addition, the Bauer et al. document does not disclose, teach or suggest obtaining information from a modem connected to a line at a central point between a switch and a remote point.

Absent disclosing, teaching or suggesting a method having all the limitations of claim 17, the Bauer et al. document cannot anticipate claim 17, or claims 18-23 dependent therefrom.

As amended herein, claim 24 recites a method of identifying service affecting conditions in the access portion of a network through which a plurality of subscribers are connected to a central point disposed between a switch and a remote point. A modem disposed at the central point and another modem disposed at the remote point of the connection to each subscriber communicate by modulating a plurality of tones. The switch is operable for connecting the remote point of the connection to each subscriber to a narrowband network. The modem at the central point is operable for coupling the remote point of the connection to each subscriber in communication with the broadband network. Step a) of claim 24 recites that per-tone information is obtained from the modem connected to the subscriber line at the central point between the switch and the remote point that indicates performance of the line for each of the plurality of tones. Step b) of claim 24 recites that the per-tone information is analyzed as a function of frequency to determine whether it contains a pattern indicative of a service affecting condition. Lastly, step c) of claim 24 recites that a service affecting condition is identified on the subscriber line when a pattern associated with that service affecting condition is identified.

As discussed above in connection with independent claims 1 and 17, the Bauer et al. document does not disclose, teach or suggest a modem connected to a subscriber line at a central point between a switch and a remote point. In addition, the Bauer et al. document does not disclose, teach or suggest obtaining information from a modem connected to a

subscriber line under test. Rather, the Bauer et al. document discloses, teaches and suggests that modem information is obtained from a table. The Sanderson document does not cure the foregoing deficiencies in the teachings of the Bauer et al. document.

Absent disclosing, teaching or suggesting a method having all the limitations of claim 24, the Bauer et al. and Sanderson documents, either individually or in combination, cannot anticipate or render obvious claim 24, or claims 25-27 dependent therefrom.

CONCLUSION

Based on the foregoing amendments and remarks, reconsideration of the rejections and allowance of claims 1-27 are requested.

Respectfully submitted,

THE WEBB LAW FIRM

By 

Randall A. Notzen
Registration No. 36,882
Attorney for Applicant
700 Koppers Building
436 Seventh Avenue
Pittsburgh, PA 15219
Telephone: (412) 471-8815
Facsimile: (412) 471-4094
E-mail: webblaw@webblaw.com